

Appl. No. 10/626,976

Amdt. dated July 26, 2005

Reply to Office action of June 29, 2005

7. (Original) The polymer composition of claim 1, wherein the melt index ratio $I_{21.6}/I_{2.16}$ of the ethylene copolymer is from 35 to 80.
8. (Original) The polymer composition of claim 1, wherein the Mw/Mn ratio is from 2.8 to 4.5.
9. (Original) The polymer composition of claim 1, wherein the unsaturated group of the silane compound comprises a vinyl, allyl, isopropenyl, butenyl, cyclohexenyl, or γ -(meth)acryloxy allyl group.
10. (Original) The polymer composition of claim 1, wherein the hydrolyzable group of the silane compound comprises a hydrocarbyloxy, hydrocarbonyloxy or hydrocarbylamino group.
11. (Original) The polymer composition of claim 1, wherein the silane compound is a vinyl trialkoxysilane and the free radical initiator is an organic peroxide.
12. (Original) The polymer composition of claim 1, further comprising a silanol condensation catalyst.
13. (Original) The polymer composition of claim 1, wherein the composition has a hot set value after 2 hours curing in 80°C water of 70% or less.
14. (Original) The polymer composition of claim 1, wherein the composition has a hot set value after 30 days of 50% or less.

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15. (Withdrawn) A silane crosslinked polymer composition, comprising the reaction product of:
- (a) a copolymer comprising polymerized ethylene monomer and C_3 to C_{12} alpha-olefin comonomer, the copolymer having a CDBI of at least 70%, a melt index $I_{2.16}$ of from 0.1 to 15 g/10 min, a density of from 0.910 to 0.940 g/cm³, a melt index ratio $I_{21.6}/I_{2.16}$ of from 30 to 80, and an Mw/Mn ratio of from 2.5 to 5.5;
 - (b) a silane grafting composition comprising a silane compound and a free radical initiator, the silane compound comprising an unsaturated group and a hydrolyzable group; and
 - (c) a silanol condensation catalyst.
16. (Withdrawn) The polymer composition of claim 15, wherein the alpha-olefin comonomer comprises 1-butene, 1-hexene or 1-octene.
17. (Withdrawn) The polymer composition of claim 15, wherein the CDBI of the ethylene copolymer is at least 75%.
18. (Withdrawn) The polymer composition of claim 15, wherein the CDBI of the ethylene copolymer is at least 80%.
19. (Withdrawn) The polymer composition of claim 15, wherein the melt index of the ethylene copolymer is from 0.3 to 10 g/10 min.
20. (Withdrawn) The polymer composition of claim 15, wherein the density of the ethylene copolymer is from 0.916 to 0.935 g/cm³.
21. (Withdrawn) The polymer composition of claim 15, wherein the melt index ratio $I_{21.6}/I_{2.16}$ of the ethylene copolymer is from 35 to 80.

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22. (Withdrawn) The polymer composition of claim 15, wherein the Mw/Mn ratio is from 2.8 to 4.5.
23. (Withdrawn) The polymer composition of claim 15, wherein the unsaturated group of the silane compound comprises a vinyl, allyl, isopropenyl, butenyl, cyclohexenyl, or γ -(meth)acryloxy allyl group.
24. (Withdrawn) The polymer composition of claim 15, wherein the hydrolyzable group of the silane compound comprises a hydrocarbyloxy, hydrocarbonyloxy or hydrocarbylamino group.
25. (Withdrawn) The polymer composition of claim 15, wherein the silane compound is a vinyl trialkoxysilane and the free radical initiator is an organic peroxide.
26. (Withdrawn) An electrical device comprising the polymer composition of any of claims 1 to 25.
27. (Withdrawn) An electrical device comprising:
- (a) an electrical conductor; and
 - (b) a layer surrounding at least a portion of the electrical conductor, the layer comprising the reaction product of:
 - (i) a copolymer comprising polymerized ethylene monomer and C₃ to C₁₂ alpha-olefin comonomer, the copolymer having a CDBI of at least 70%, a melt index I_{2.16} of from 0.1 to 15 g/10 min, a density of from 0.910 to 0.940 g/cm³, a melt index ratio I_{21.6}/I_{2.16} of from 30 to 80, and an Mw/Mn ratio of from 2.5 to 5.5; and
 - (ii) a silane grafting composition comprising a silane compound and a free radical initiator, the silane compound comprising an unsaturated group and a hydrolyzable group; and
 - (iii) a silanol condensation catalyst.

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28. (Withdrawn) The electrical device of claim 27, wherein the layer surrounding at least a portion of the conductor is an insulating layer.
29. (Withdrawn) The electrical device of claim 27, wherein the layer surrounding at least a portion of the conductor is a semiconducting layer.
30. (Withdrawn) The electrical device of claim 27, wherein the layer surrounding at least a portion of the conductor is an outer jacket layer.
31. (Withdrawn) The electrical device of any of claims 27-30, wherein the device is a power cable adapted to transport electricity at a voltage potential of less than or equal to 66 kV.
32. (Withdrawn) The electrical device of any of claims 27-30, wherein the device is a power cable adapted to transport electricity at a voltage potential of less than or equal to 35 kV.
33. (Withdrawn) The electrical device of any of claims 27-30, wherein the device is a power cable adapted to transport electricity at a voltage potential of less than or equal to 6 kV.
34. (Withdrawn) The electrical device of any of claims 27-30, wherein the device is a power cable adapted to transport electricity at a voltage potential of less than or equal to 1 kV.
35. (Withdrawn) The electrical device of any of claims 27-30, wherein the device is a telecommunications cable.
36. (Withdrawn) The electrical device of any of claims 27-30, wherein the device is a combined power/telecommunications cable.